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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,317	07/08/2003	Joseph S. Stam	AUTO 218	9360

28167 7590 09/13/2005  
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EXAMINER

GAGLIARDI, ALBERT J

ART UNIT PAPER NUMBER

2878

DATE MAILED: 09/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/615,317	Applicant(s) STAM ET AL.	
	Examiner Albert J. Gagliardi	Art Unit 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-60 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-4 and 9, drawn to an image sensor including a variety of sub-components, classified in class 250, subclass 336.1.
  - II. Claims 5-6, drawn to an image sensor including an array of pixels and an attenuating filter, classified in class 250, subclass 339.02.
  - III. Claims 7-8, 28-31, 39-40, 44 and 47-51, drawn to an image sensor including an attenuating filter and a control system to generate an image, classified in class 250, subclass 332.
  - IV. Claims 10-21, drawn to an image sensor arrangement including a substrate, a passivation layer, and antireflective layers, classified in class 250, subclass 338.4 and including additional searches in at least class 257, subclasses E23.132 and 437.
  - V. Claims 22-23, drawn to an image sensor arrangement including a substrate, an encapsulation structure, and antireflective layers formed on the encapsulation structure, classified in class 250, subclass 338.4 and including additional searches in at least class 257, subclasses 433 and 437.
  - VI. Claims 24-25, drawn to an image sensor arrangement including non-silicon features coated with an absorptive material, classified in class 250, subclass 338.4 and including additional searches in at least class 257, subclass 436.
  - VII. Claims 26-27, 32-38, 41-43, and 45-46 drawn to an image sensor arrangement including a light source configured to operate in synchronization with the image

sensor, classified in class 250, subclass 332 and including additional searches in at least subclass 341.1.

VIII Claims 52-55, drawn to a vision system including a control system configured to identify individual light sources, classified in class 250, subclass 332 and including additional searches in at least class 701, subclass 300.

IX Claims 56-58, drawn to a method of creating a synthetic a high dynamic range image classified in class 250, subclass 341.8.

X Claims 59-60, drawn to method of detecting objects by finding distinct peaks in a synthetic a high dynamic range image, classified in class 250, subclass 332 and including additional searches in at least class 701, subclass 300.

2. The inventions are distinct, each from the other because of the following reasons:

Invention I and inventions II-X are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombinations as claimed because the plurality of subcombination as independently claimed provide evidence that the combination does not rely on any one of the particular subcombinations. In addition, the plurality of claimed subcombinations are considered to have separate utility by themselves or in other combinations as evidenced by their being claimed either independently in or other more limited combinations.

Inventions II through X are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be

Art Unit: 2878

separately usable. In the instant case, inventions have separate utility as evidenced by their being independently claimed. See MPEP § 806.05(d).

Inventions I-VII and inventions IX-X are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the processes as claimed methods may be practiced by materially different apparatus such as apparatus not limited to infrared vision systems, not utilizing specific detector arrangements, not requiring a particular light source, etc.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, and/or the search required for some groups is not required for other groups, restriction for examination purposes as indicated is proper.

4. In regard to the inventions including a control system, this application further contains claims directed to the following patentably distinct species/subcombinations of the claimed invention:

Species 1, a species directed to controlling the vision system to create a synthetic image

Species 2, a species directed to controlling the vision system to create a coded image.

Species 3, a species directed to controlling the vision system to find distant peaks.

5. If Applicant elects an invention including a control system, the Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claim appears generic to all of the species/subcombinations relating to the control system.

Art Unit: 2878

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

6. No telephone call was made to request an oral election to the above restriction requirement due to the large number of inventions (i.e., more than three).

7. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

8. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the

Art Unit: 2878

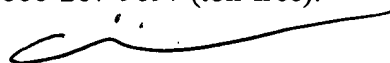
application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert J. Gagliardi whose telephone number is (571) 272-2436. The examiner can normally be reached on Monday thru Friday from 9 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Albert J. Gagliardi  
Primary Examiner  
Art Unit 2878

AJG